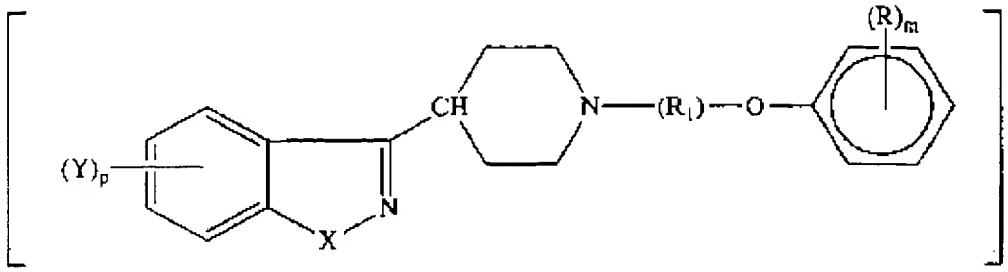
CLAIMS PTO

REISSUE

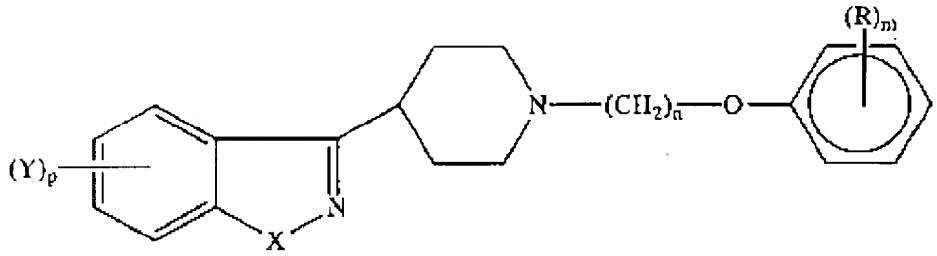
AMDT 9/12/04

GJT

1. (Amended four times) A compound of the formula:



or



wherein

X is –O– or –S–;

p is 1 or 2;

Y is hydrogen, lower alkyl, hydroxy, chlorine, fluorine, bromine, iodine, lower alkoxy, trifluoromethyl, nitro, or amino, when p is 1;

Y is lower alkoxy[, hydroxy and halogen] when p is 2 and X is –O–;

[(R_1) is R_{20}, R_{21}, or R_{22}, wherein:

R_{20} is $-(CH_2)_n-$ where] n is 2, 3, 4 or 5;

[R_{21} is

$-CH_2-CH=CH-CH_2-$,

$-CH_2-C\equiv C-CH_2-$,

$-CH_2-CH=CH-CH_2-CH_2$,

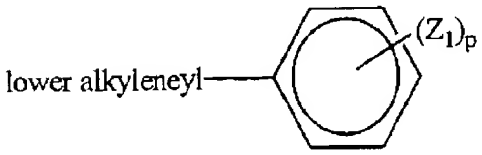
$-CH_2-CH_2-CH=CH-CH_2-$,

$-CH_2C\equiv C-CH_2-CH_2-$, or

$-CH_2-CH_2-C\equiv C-CH_2-$,

the $-CH=CH-$ bond being cis or trans;

R_{22} is R_{20} or R_{21} in which one or more carbon atoms of R_{20} or R_{21} are



;

where Z_1 is lower alkyl, -OH, lower alkoxy, $-CF_3$, $-NO_2$,

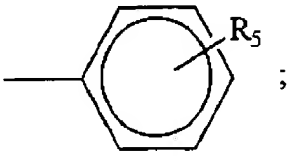
$-NH_2$ or halogen;]

R is hydrogen, lower alkyl, lower alkoxy, hydroxyl, carboxyl, chlorine, fluorine, bromine, iodine, amino, lower mono or dialkylamino, nitro, lower alkyl thio,

trifluoromethoxy, cyano, acylamino, trifluoromethyl, trifluoroacetyl, aminocarbonyl, [monoalkylaminocarbonyl, dialkylaminocarbonyl, formyl,] -C(=O)-alkyl, -C(=O)-O-alkyl, -C(=O)-aryl, -C(=O)-heteroaryl, or -CH(OR$_7$)-alkyl; [-CH(OR^7)-alkyl, -C(=W)-alkyl, -C(=W)-aryl, and -C(=W)-heteroaryl;]

wherein alkyl is lower alkyl;

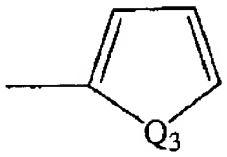
aryl is phenyl or



;

wherein R_5 is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine, fluorine, bromine, iodine, lower monoalkylamino, [lower dialkylamino,] nitro, cyano, trifluoromethyl, or trifluoromethoxy;

heteroaryl is



;

wherein Q_3 is -O-, -S-, -NH-, or -CH=N-;

[W is CH_2 or CHR_8 or N-R_9 ;]

R_7 is hydrogen, lower alkyl, or acyl;

[R_8 is lower alkyl;

R_9 is hydroxy, lower alkoxy, or $-NHR_{10}$; and

R_{10} is hydrogen, lower alkyl, C_1-C_3 acyl, aryl,

-C(=O)-aryl or -C(=O)-heteroaryl,

where aryl and heteroaryl are as defined above;]

and

m is 1, 2, or 3;

[all geometric, optical and stereoisomers thereof,] or a pharmaceutically acceptable acid addition salt thereof.

2. A compound as claimed in claim 1, which is 1-[4-[3-[4-(1,2-benzisoxazol-3-yl)-1-piperidinyl]propoxy]-3-methoxyphenyl]ethanone or a pharmaceutically acceptable acid addition salt thereof.

3. A compound as claimed in claim 1, which is 1-[4-[3-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]-propoxy]-3-methoxyphenyl]ethanone or a pharmaceutically acceptable acid addition salt thereof.

4. A compound as claimed in claim 1, which is 1-[4-[4-[4-(1,2-benzisoxazol-3-yl)-1-piperidinyl]butoxy]-3methoxyphenyl]ethanone or a pharmaceutically acceptable acid addition salt thereof.

5. A compound as claimed in claim 1, which is 1-[4-[4-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]butoxy]-3-methoxyphenyl]ethanone or a pharmaceutically acceptable acid addition salt thereof.

6. A compound as claimed in claim 1, which is 1-[4-[2-[4-(1,2-benzisoxazol-3-yl)-1-piperidinyl]ethoxy]-3-methoxyphenyl]ethanone or a pharmaceutically acceptable acid addition salt thereof.

7. A compound as claimed in claim 1, which is 1-[4-[2-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]ethoxy]-3-methoxyphenyl]ethanone or a pharmaceutically acceptable acid addition salt thereof.

8. A compound as claimed in claim 1, which is 1-[4-[3-[4-(1,2-benzisothiazol-3-yl)-1-piperidinyl]propoxy]-3-methoxyphenyl]ethanone or a pharmaceutically acceptable acid addition salt thereof.

9. A compound as claimed in claim 1, which is 4-[3-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]propoxy]-3-methoxy-α-methylbenzenemethanol or a pharmaceutically acceptable acid addition salt thereof.

10. A compound as claimed in claim 1, which is 1-[4-[3-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]-propoxy]-3-hydroxyphenyl]ethanone or a pharmaceutically acceptable acid addition salt thereof.

11. A compound as claimed in claim 1, which is 1-[4-[3-[4-(6-chloro-1,2-benzisoxazol-3-yl)-1-piperidinyl]-propoxy]-3-methoxyphenyl]ethanone or a pharmaceutically acceptable acid addition salt thereof.

12. A compound as claimed in claim 1, which is 1-[4-[4-[4-(6-chloro-1,2-benzisoxazol-3-yl)-1-piperidinyl]-butoxy]-3-methoxyphenyl]ethanone fumarate or a pharmaceutically acceptable acid addition salt thereof.

13. A compound as claimed in claim 1, which is 1-[4-[3-[4-(5-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]-propoxy]-3-methoxyphenyl]ethanone or a pharmaceutically acceptable acid addition salt thereof.

14. A compound as claimed in claim 1, which is 6-fluoro-3-[1-[3-(2-methoxyphenoxy)propyl]-4-piperidinyl]-1,2-benzisoxazole fumarate or a pharmaceutically acceptable acid addition salt thereof.

15. A compound as claimed in claim 1, which is 1-[3-[3-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]-propoxy]-4-methoxyphenyl]phenylmethanone or a pharmaceutically acceptable acid addition salt thereof.

16. A compound as claimed in claim 1, which is 1-[4-[2-[4-(6-chloro-1,2-benzisoxazol-3-yl)-1-piperidinyl]ethoxy]-3-methoxyphenyl]ethanone or a pharmaceutically acceptable acid addition salt thereof.

17. A compound as claimed in claim 1, which is 1-[3-[3-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]-propoxy]phenyl]ethanone or a pharmaceutically acceptable acid addition salt thereof.

18. A compound as claimed in claim 1, which is 1-[4-[3-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]-propoxy]-2-methylphenyl]ethanone or a pharmaceutically acceptable acid addition salt thereof.

19. A compound as claimed in claim 1, which is 1-[2-[3-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]-propoxy]-5-methylphenyl]ethanone or a pharmaceutically acceptable acid addition salt thereof.

20. A compound as claimed in claim 1, which is N-[3-[3-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]-propoxy]-4-methoxyphenyl]acetamide or a pharmaceutically acceptable acid addition salt thereof.

21. A compound as claimed in claim 1, which is 1-[4-[3-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]-propoxy]-3-methylphenyl]ethanone or a pharmaceutically acceptable acid addition salt thereof.

22. A compound as claimed in claim 1, which is 1-[4-[3-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]-propoxy]phenyl]ethanone or a pharmaceutically acceptable acid addition salt thereof.

23. A compound as claimed in claim 1, which is 4-[3-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]-propoxy]-3-methoxybenzonitrile or a pharmaceutically acceptable acid addition salt thereof.

24. A compound as claimed in claim 1, which is 1-[3,5-dibromo-4-[3-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]propoxy]phenyl]ethanone or a pharmaceutically acceptable acid addition salt thereof.

25. A compound as claimed in claim 1, which is 6-fluoro-3-[1-(3-phenoxypropyl)-4-piperidinyl]-1,2-benzisoxazole or a pharmaceutically acceptable acid addition salt thereof.

26. (Amended) A compound as claimed in claim 1, [which is 1-[4-[3-[4-(6-fluoro-1,2-benzisoxazol-3-yl]-1-piperidinyl]-propoxy]-3-methylmercaptophenyl]ethanone or] which is 1-[4-[3-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]-propoxy]-3-methylmercaptophenyl]ethanone or a pharmaceutically acceptable acid addition salt thereof.

27. A compound as claimed in claim 1, which is 1-[4-[4-[4-(1,2-benzisothiazol-3-yl)-1-piperidinyl]butoxy]-3-methoxyphenyl]ethanone or a pharmaceutically acceptable acid addition salt thereof.

28. A compound as claimed in claim 1, which is 1-[4-[3-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]-propoxy]-3-methoxyphenyl]phenylmethanone or a pharmaceutically acceptable acid addition salt thereof.

29. A compound as claimed in claim 1, which is 3-[1-[3-[4-(1-ethoxyethyl)-2-methoxyphenoxy]propyl]-4-piperidinyl]-6-fluoro-1,2-benzisoxazole or a pharmaceutically acceptable acid addition salt thereof.

30. A compound as claimed in claim 1, which is 3-[1-[3-[4-(1-acetoxyethyl)-2-methoxyphenoxy]propyl]-4-piperidinyl]-6-fluoro-1,2-benzisoxazole or a pharmaceutically acceptable acid addition salt thereof.

31. A compound as claimed in claim 1, which is 1-[4-[3-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]-propoxy]-3-methoxyphenyl]pentanone or a pharmaceutically acceptable acid addition salt thereof.

32. A compound as claimed in claim 1, which is 2-[3-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]-propoxy]-N-methylbenzenamine or a pharmaceutically acceptable acid addition salt thereof.

33. A compound as claimed in claim 1, which is 3-[1-[3-(4-bromo-2-methoxyphenoxy)propyl]-4-piperidinyl]-6-fluoro-1,2-benzisoxazole or a pharmaceutically acceptable acid addition salt thereof.

34. A compound as claimed in claim 1, which is 1-[4-[3-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]-propoxy]-3-methoxyphenyl]propanone or a pharmaceutically acceptable acid addition salt thereof.

35. A compound as claimed in claim 1, which is 4-[3-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]-propoxy]-3-methoxybenzamide or a pharmaceutically acceptable acid addition salt thereof.

36. A compound as claimed in claim 1, which is 1-[4-[3-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]-propoxy]-3-(methylamino)phenyl]ethanone or a pharmaceutically acceptable acid addition salt thereof.

37. A compound as claimed in claim 1, which is 1-[4-[3-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]-propoxy]-3-ethoxphenyl]ethanone or a pharmaceutically acceptable acid addition salt thereof.

38. A compound as claimed in claim 1, which is N-[2-[3-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]-propoxy]phenyl]acetamide, or a pharmaceutically acceptable acid addition salt thereof.

39. A compound as claimed in claim 1, which is 1-[4-[3-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]-propoxy]-3-dimethylaminophenyl]ethanone, or a pharmaceutically acceptable acid addition salt thereof.

40. A compound as claimed in claim 1, which is 1-[4-[3-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]-propoxy]-2-methoxyphenyl]ethanone, or a pharmaceutically acceptable acid addition salt thereof.

41. A compound as claimed in claim 1, which is 4-[3-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]-propoxy]-3-hydroxy-α-methylbenzene methanol, or a pharmaceutically acceptable acid addition salt thereof.

42. A compound as claimed in claim 1, which is 2-[3-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]-propoxy]aniline, or a pharmaceutically acceptable acid addition salt thereof.

43. A compound as claimed in claim 1, which is N-[5-acetyl-2-[3-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]propoxy]phenyl]acetamide, or a pharmaceutically acceptable acid addition salt thereof.

44. A compound as claimed in claim 1, which is 3-[1-[3-(4-ethyl-2-methoxyphenoxy)propyl]-4-piperidinyl]-6-fluoro-1,2-benzisoxazole, or a pharmaceutically acceptable acid addition salt thereof.

45. A compound as claimed in claim 1, which is 1-[3,5-dimethoxy-4-[3-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]propoxy]phenyl]ethanone, or a pharmaceutically acceptable acid addition salt thereof.

46. A compound as claimed in claim 1, which is N-[3-[3-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]-propoxy]phenyl]acetamide, or a pharmaceutically acceptable acid addition salt thereof.

47. A compound as claimed in claim 1, which is 3-[3-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]-propoxy]aniline, or a pharmaceutically acceptable acid addition salt thereof.

48. A compound as claimed in claim 1, which is 3-[3-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]-propoxy]-4methoxyaniline, or a pharmaceutically acceptable acid addition salt thereof.

49. A compound as claimed in claim 1, which is 1-[4-[3-[4-(6-fluoro-1,2-benzisothiazol-3-yl)-1-piperidinyl]-propoxy]-3-methylaminophenyl]ethanone, or a pharmaceutically acceptable acid addition salt thereof.

50. A compound as claimed in claim 1, which is N-[3-[3-[4-(6-fluoro-1,2-benzisothiazol-3-yl)-1-piperidinyl]-propoxy]-4-methoxyphenyl]acetamide, or a pharmaceutically acceptable acid addition salt thereof.

51. A compound as claimed in claim 1, which is 1-[4-[3-[4-(6-fluoro-1,2-benzisothiazol-3-yl)-1-piperidinyl]-propoxy]-3-methoxyphenyl]ethanone, or a pharmaceutically acceptable acid addition salt thereof.

52. (Amended) A compound as claimed in claim [1] 132, which is N,N-dimethyl-4-[3-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]propoxy]-3-methoxybenzamide, or a pharmaceutically acceptable acid addition salt thereof.

53. (Amended) A compound as claimed in claim [1] 132, which is 1-[4-[3-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]-propoxy]-3-methoxyphenyl]ethanone oxime, or a pharmaceutically acceptable acid addition salt thereof.

54. (Amended) A compound as claimed in claim [1] 132, which is 1-[4-[3-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]-propoxy]methoxyphenyl]ethanone oxime O-methyl ether, or a pharmaceutically acceptable acid addition salt thereof.

55. (Amended) A compound as claimed in claim [1] 132, which is 1-[4-[3-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]-propoxy]-3-methoxyphenyl]ethanone hydrazone, or a pharmaceutically acceptable acid addition salt thereof.

56. (Amended) A compound as claimed in claim [1] 132, which is 6-fluoro-3-[1-[3-[2-methoxy-4-(1-methylethenyl)phenoxy]-propyl]-4-piperidinyl]-1,2-benzisoxazole, or a pharmaceutically acceptable acid addition salt thereof.

57. (Amended) A compound as claimed in claim [1] 87, which is (Z)-1-[4-[[4-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]-2-butenyl]oxy]-3-methoxyphenyl]ethanone, or a pharmaceutically acceptable acid addition salt thereof.

58. (Amended) A compound as claimed in claim [1] 87, which is (E)-1-[3-[4-[[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]-2-butenyl]oxy]-4-hydroxyphenyl]ethanone, or a pharmaceutically acceptable acid addition salt thereof.

59. (Twice Amended) A compound [as claimed in claim 1], which is (E)-1-[3-[4-[[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]-2-butenyl]oxy]-4-benzyloxyphenyl]ethanone, or a pharmaceutically acceptable acid addition salt thereof.

60. A compound as claimed in claim 1, which is 1-[4-[3-[4-(6-Fluoro-1,2-benziosoxazol-3-yl)-1-piperidinyl]-propoxy]-3-bromophenyl]ethanone or a pharmaceutically acceptable acid addition salt thereof.

61. A compound as claimed in claim 1, which is 1-[4-[3-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]-propoxy]-3-methoxyphenyl]-2,2,2-trifluoroethanone, or a pharmaceutically acceptable acid addition salt thereof.

62. A compound as claimed in claim 1, which is 3-[1-[3-[4-(1-methoxyethyl)-2-hydroxyphenoxyl]propyl]-4-piperidinyl]-6-fluoro-1,2-benzisoxazole, or a pharmaceutically acceptable acid addition salt thereof.

63. A compound as claimed in claim 1, which is 1-[4-[3-[4-(6-fluoro-1,2-benzisothiazol-3-yl)-1-piperidinyl]-propoxy]-3-hydroxyphenyl]ethanone, or a pharmaceutically acceptable acid addition salt thereof.

64. A compound as claimed in claim 1, which is 4-[3-[4-(6-fluoro-1,2-benzisothiazol-3-yl)-1-piperidinyl]-propoxy]-3-methoxy-alpha-methylbenzenemethanol, or a pharmaceutically acceptable acid addition salt thereof.

65. (Twice Amended) A compound as claimed in claim [1, which is 1-(R)-(-)-[4-[3-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]-2-methyl-1-propoxy]-3-methoxyphenyl]ethanone, or] 104, which is 1-(R)-(-)-[4-[3-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]-2-methyl-1-propoxy]-3-methoxyphenyl]ethanone, or a pharmaceutically acceptable acid addition salt thereof.

66. (Amended) A compound as claimed in claim [1] 104, which is 1-(S)(+)-[4-[3-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]-2-methyl-1-propoxy]-3-methoxyphenyl]ethanone, or a pharmaceutically acceptable acid addition salt thereof.

67. The compound of claim 1, wherein the pharmaceutically acceptable addition salt is selected from the group consisting of salts of mineral acids, salts of monobasic carboxylic acids, salts of dibasic carboxylic acids, and salts of tribasic carboxylic acids.

68. The compound of claim 67, wherein said pharmaceutically acceptable addition salts are selected from the group consisting of salts of hydrochloric acid, sulfuric acid, nitric acid, acetic acid, propionic acid, maleic acid, fumaric acid, carboxysuccinic acid, and citric acid.

69. The compound of claim 1, wherein Y is in the 5 position.

70. The compound of claim 1, wherein Y is in the 6 position.

71. The compound of claim 1, wherein Y is selected from the group consisting of hydrogen, chlorine, bromine and fluorine.

72. The compound of claim 71, wherein Y is fluorine.

73. The compound of claim 72, wherein Y is in the 6 position.

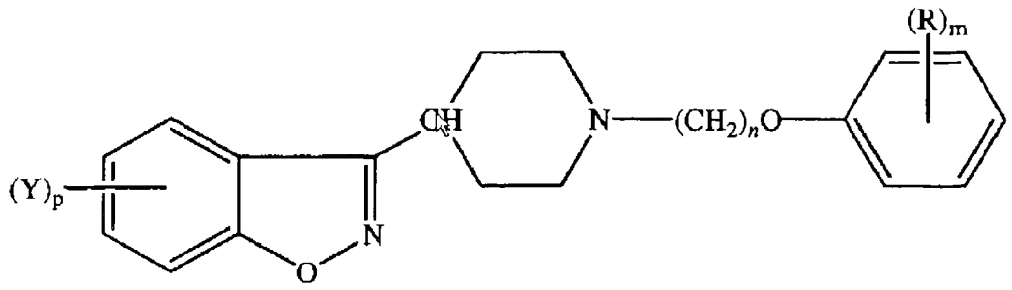
74. (Amended) The compound of claim 1, wherein p is 2, X is -O-, and Y is [selected from the group consisting of] lower alkoxy[, hydroxy and halogen groups].

75. The compound of claim 74, wherein Y is a methoxy group.

76. The compound of claim 1, wherein R_1 is —CH-2—CH=CH=CH$_2$—.

77. (Amended) The compound of claim 1, wherein R is selected from the group consisting of hydrogen, C_1-C_3 alkyl, C_1-C_3 alkoxy, hydroxyl, -$COCF_3$, C_1-C_6 alkanoyl, Cl, F, Br, I, C_1-C_3 alkylamino, [-NO_3] - NO_2, -CF_3, -OCF_3, and -C(=O)-lower alkyl.

78. (Amended three times) A compound of the formula:



wherein p is 1 or 2;

Y is hydrogen, Cl, Br, or F, when p is 1;

Y is lower alkoxy[, hydroxy, or halogen] when p is 2;

n is 2, 3, or 4;

R is hydrogen, C_1-C_3 alkyl, C_1-C_3 alkoxy, hydroxyl, [alkanoyl,] Cl, F, Br, I, amino, C_1-C_3 mono or dialkyl amino, acylamino, $-NO_2$, $-OCF_3$, $-CF_3$, alkyl-C(=O)-, CF_3-C(=O)-, or $-CH(OR_7)$-alkyl;

alkyl is lower alkyl;

R_7 is hydrogen, lower alkyl, lower alkyl-C(=O)-, or CF_3-C(=O)-;

and m is 1, 2, or 3;

R is hydrogen, C_1-C_3 alkyl, C_1-C_3 alkoxy, hydroxyl, [alkanoyl,] Cl, F, Br, I, amino, C_1-C_3 mono or dialkyl amino, acylamino, $-NO_2$, $-OCF_3$, $-CF_3$, alkyl-C(=O)-, CF_3-C(=O)-, or $-CH(OR_7)$-alkyl;

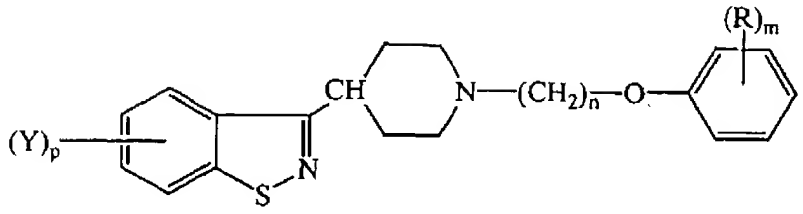
alkyl is lower alkyl;

R_7 is hydrogen, lower alkyl, lower alkyl-C(=O)-, or CF_3-C(=O)-;

and m is 1, 2, or 3;

all geometric, optical and stereoisomers thereof or a pharmaceutically acceptable acid addition salt thereof.

79. (Twice Amended) A compound of the formula:



wherein p is 1 or 2;

Y is hydrogen, Cl, Br, or F, when p is 1;

Y is lower alkoxy[, hydroxy, or halogen] when p is 2;

n is 2, 3, or 4;

R is hydrogen, C_1-C_3 alkyl, C_1-C_3 alkoxy, hydroxyl, acyl, alkanoyl, Cl, F, Br, I, amino, C_1-C_3 mono or dialkyl amino, acylamino, $-NO_2$, $-OCF_3$, $-CF_3$, alkyl-C(=O)-, CF_3-C(=O)-, or $-CH(OR_7)$-alkyl;

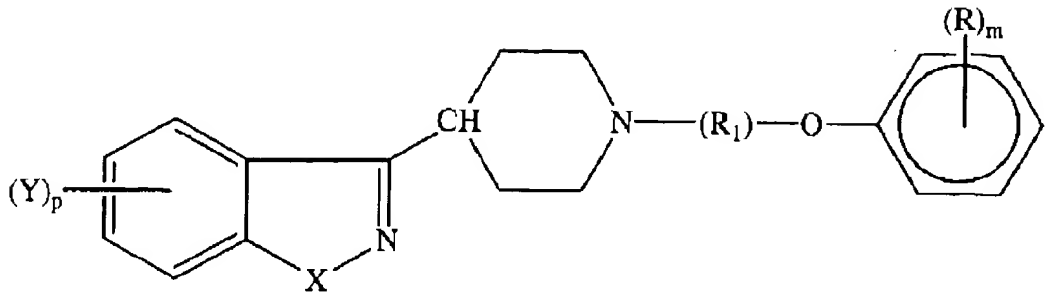
alkyl is lower alkyl;

R_7 is hydrogen, lower alkyl, [or] lower alkyl-C(=O)-, or CF_3-C(=O)-;

and m is 1, 2, or 3;

all geometric, optical and stereoisomers thereof or a pharmaceutically acceptable acid addition salt thereof.

80. (Amended five times) A compound as claimed in claim 1 [of the formula:



wherein

X is -O- or -S-;

p is 1 or 2;

Y is hydrogen, lower alkyl, hydroxy, chlorine, fluorine, bromine, iodine, lower alkoxy, trifluoromethyl, nitro, or amino, when p is 1;

Y is lower alkoxy, hydroxy and halogen when p is 2 and X is -O-;

(R_1) is R_{20}, R_{21}, or R_{22}, wherein:

R_{20} is $-(CH_2)_n-$ where n is 2, 3, 4 or 5;

R_{21} is

R_{21} is

$-CH_2-CH=CH-CH_2-$,

$-CH_2-C\equiv C-CH_2-$,

$-CH_2-CH=CH-CH_2-CH_2-$,

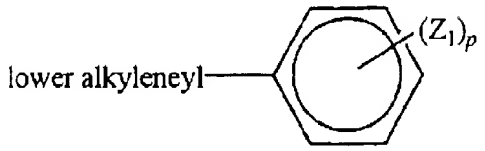
$-CH_2-CH_2-CH=CH-CH_2-$,

$-CH_2-C\equiv C-CH_2-CH_2-$, or

$-CH_2-CH_2-C\equiv C-CH_2-$,

the $-CH=CH-$ bond being cis or trans;

R_{22} is R_{20} or R_{21} in which one or more carbon atoms of R_{20} or R_{21} are substituted by at least one C_1-C_6 linear alkyl group, phenyl group or



;

where Z_1 is lower alkyl, -OH, lower alkoxy, $-CF_3$, $-NO_2$, $-NH_2$ or halogen; and R and m are as defined hereinafter;

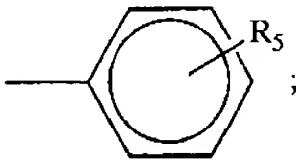
m is 1, 2, or 3; and

when m is 1, 2, or 3, R is hydrogen, lower alkyl, lower alkoxy, hydroxyl, carboxyl, chlorine, fluorine, bromine, iodine, amino, lower mono or dialkylamino,

nitro, lower alkyl thio, trifluoromethoxy, cyano, acylamino, trifluoromethyl, trifluoroacetyl, aminocarbonyl, monoalkylaminocarbonyl, dialkylaminocarbonyl, formyl, -C(=O)-alkyl, -C(=O)-O-alkyl, -C(=O)-aryl, -C(=O)-heteroaryl, -CH(OR^7)-alkyl, -C(=W)-alkyl, -C(=W)-aryl, and -C(=W)-heteroaryl;

alkyl is lower alkyl;

aryl is phenyl or

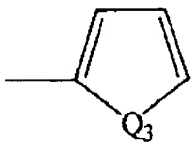


;

where R_5 is hydrogen, lower alkyl, lower alkoxy, hydroxy,

chlorine, fluorine, bromine, iodine, lower monoalkylamino, lower dialkylamino, nitro, cyano, trifluoromethyl, trifluoromethoxy;

heteroaryl is



;

Q_3 is -O-, -S-, -NH-, -CH=N-;

W is CH_2 or CHR_8 or N-R_9;

R_7 is hydrogen, lower alkyl, or acyl;

R_8 is lower alkyl;

R_9 is hydroxy, lower alkoxy, or -NHR_{10}; and

R_{10} is hydrogen, lower alkyl, C_1-C_3 acyl, aryl, -C(=O)-aryl or -C(=O)-heteroaryl, where aryl and heteroaryl are as defined above; and]

with the proviso that when m is 3, R is not -C(=O)-heteroaryl or -C(=W)-heteroaryl;

[all geometric, optical and stereoisomers thereof,] or a pharmaceutically acceptable acid addition salt thereof.

81. (Amended) A compound as claimed in claim [1] 87, which is (E)-1-[4-[[4-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]-2-butenyl]oxy]-3-methoxyphenyl]ethanone, or a pharmaceutically acceptable acid addition salt thereof.

82. (Amended) A pharmaceutical composition, which comprises a compound as claimed in any one of claims [1-81] 1-75 and 77-81, and a pharmaceutically acceptable carrier therefor.

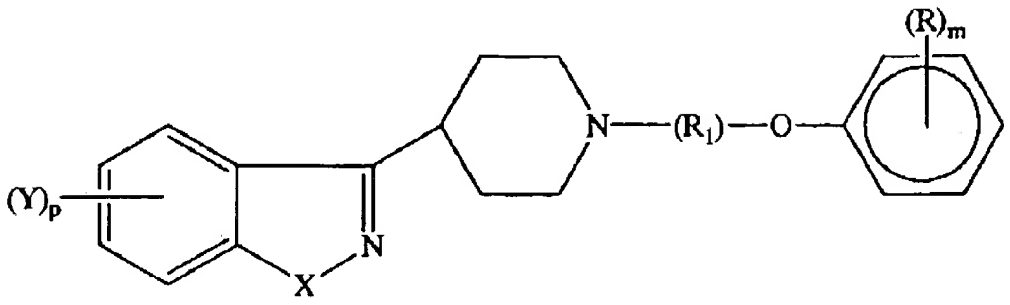
83. (Amended) An antipsychotic composition which comprises a compound as claimed in any one of claims [1-81] 1-75 and 77-81, in an amount sufficient to produce an antipsychotic effect, and a pharmaceutically acceptable carrier therefor.

84. (Amended) A method of treating psychoses, which comprises administering to a mammal a psychoses-treating effective amount of a compound as claimed in any one of claims [1-81] 1-75 and 77-81.

85. (Amended) An analgesic composition which comprises a compound as claimed in any one of claims [1-81] 1-75 and 77-81, in an amount sufficient to produce a pain-relieving effect, and a pharmaceutically acceptable carrier therefor.

86. (Amended) A method of alleviating pain, which comprises administering to a mammal a pain-relieving effective amount of a compound as claimed in any one of claims [1-81] 1-75 and 77-81.

87. (Amended) A compound of the formula



wherein

X is -O- or -S-;

p is 1 or 2;

Y is hydrogen, lower alkyl, hydroxy, chlorine, fluorine, bromine, iodine, lower alkoxy, trifluoromethyl, nitro, or amino, when p is 1;

Y is lower alkoxy, hydroxy and halogen when p is 2 and X is -O-;

(R_1) is

$-CH_2-CH=CH-CH_2-$,

$-CH_2-C\equiv C-CH_2-$,

$-CH_2-CH=CH-CH_2-CH_2-$,

$-CH_2-CH_2-CH=CH-CH_2-$,

$-CH_2-C\equiv C-CH_2-CH_2-$, or

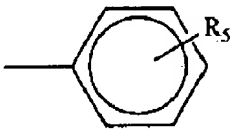
$-CH_2-CH_2-C\equiv C-CH_2-$,

the -CH=CH- bond being cis or trans;

R is hydrogen, lower alkyl, lower alkoxy, hydroxyl, carboxyl, chlorine, fluorine, bromine, iodine, amino, lower mono or dialkylamino, nitro, lower alkyl thio, trifluoromethoxy, cyano, acylamino, trifluoromethyl, trifluoroacetyl, aminocarbonyl,dialkylaminocarbonyl, formyl, -C(=O)-alkyl, -C(=O)-O-alkyl, -C(=O)-aryl, -C(=O)-heteroaryl, -CH(OR_7)-alkyl, -C(=W)-alkyl, -C(=W)-aryl, or -C(=W)-heteroaryl;

wherein alkyl is lower alkyl;

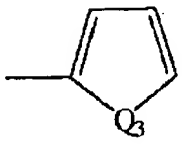
aryl is phenyl or



;

wherein R_5 is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine, fluorine, bromine, iodine, lower monoalkylamino, lower dialkylamino, nitro, cyano, trifluoromethyl, or trifluoromethoxy;

heteroaryl is



;

wherein O_3 is -O-, -S-, -NH-, or -CH=N-;

W is CH_2 or CHR_8 or $N-R_9$;

R_7 is hydrogen, lower alkyl, or acyl;

R_8 is lower alkyl;

R_9 is hydroxy, lower alkoxy, or $-NHR_{10}$; and

R_{10} is hydrogen, lower alkyl, C_1-C_3 acyl, aryl, $-C(=O)$-aryl, or $-C(=O)$-heteroaryl, wherein aryl and heteroaryl are as defined above; and

m is 1, 2, or 3;

all geometric, optical and stereoisomers thereof, or a pharmaceutically acceptable acid addition salt thereof.

88. The compound of claim 87, wherein the pharmaceutically acceptable addition salt is selected from the group consisting of salts of mineral acids, salts of monobasic carboxylic acids, salts of dibasic carboxylic acids, and salts of tribasic carboxylic acids.

89. The compound of claim 88, wherein said pharmaceutically acceptable addition salts are selected from the group consisting of salts of hydrochloric acid, sulfuric acid, nitric acid, acetic acid, propionic acid, maleic acid, fumaric acid, carboxysuccinic acid, and citric acid.

90. The compound of claim 87, wherein Y is in the 5 position.

91. The compound of claim 87, wherein Y is in the 6 position.

92. The compound of claim 87, wherein Y is selected from the group consisting of hydrogen, chlorine, bromine and fluorine.

93. The compound of claim 92, wherein Y is fluorine.

94. The compound of claim 93, wherein Y is in the 6 position.

95. The compound of claim 87, wherein p is 2, X is -O-, and Y is selected from th group consisting of lower alkoxy, hydroxy and halogen groups.

96. The compound of claim 95, wherein Y is a methoxy group.

97. The compound of claim 87, wherein R_1 is $-CH_2-CH=CH-CH_2-$.

98. The compound of claim 87, wherein R is selected from the group consisting of hydrogen, C_1-C_3 alkyl, C_1-C_3 alkoxy, hydroxyl, $-COCF_3$, C_1-C_6 alkanoyl, Cl, F, Br, I, C_1-C_3 alkylamino, $-NO_2$, $-CF_3$, $-OCF_3$, and -C(=O)-lower alkyl.

99. A pharmaceutical composition, which comprises a compound as claimed in claim 87, and a pharmaceutically acceptable carrier therefor.

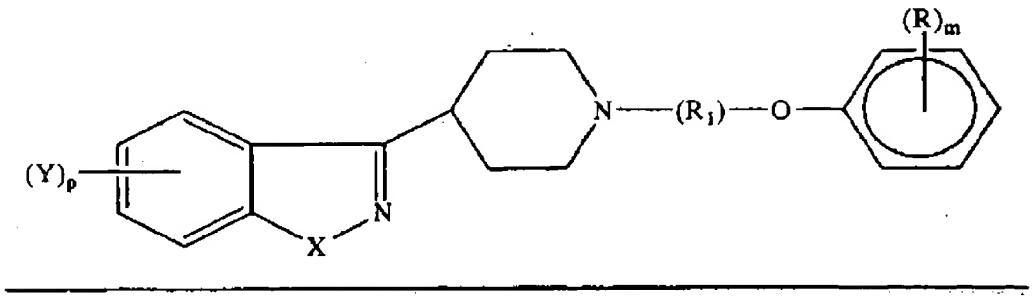
100. An antipsychotic composition which comprises a compound as claimed in claim 87, in an amount sufficient to produce an antipsychotic effect, and a pharmaceutically acceptable carrier therefor.

101. A method of treating psychoses, which comprises administering to a mammal a psychoses-treating effective amount of a compound as claimed in claim 87.

102. An analgesic composition which comprises a compound as claimed in claim 87, in an amount sufficient to produce a pain-relieving effect, and a pharmaceutically acceptable carrier therefor.

103. A method of alleviating pain, which comprises administering to a mammal a pain-relieving effective amount of a compound as claimed in claim 87.

104. (Amended) A compound of the formula



wherein

X is -O- or -S-;

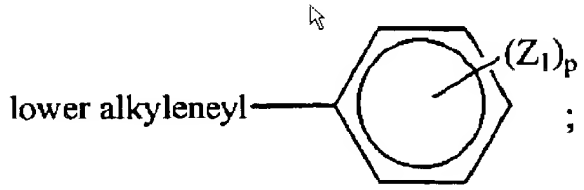
p is 1 or 2;

Y is hydrogen, lower alkyl, hydroxy, chlorine, fluorine, bromine, iodine, lower alkoxy, trifluoromethyl, nitro, or amino, when p is 1;

Y is lower alkoxy, hydroxy or halogen when p is 2 and X is -O-;

(R_1) is R_{20} or R_{21} in which one or more carbon atoms of R_{20} or R_{21} are substituted by

at least one C_1-C_6 linear alkyl group, phenyl group or



;

wherein Z_1 is lower alkyl, -OH, lower alkoxy, $-CF_3$, $-NO_2$, $-NH_2$, or halogen;

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105. The compound of claim 104, wherein the pharmaceutically acceptable addition salt is selected from the group consisting of salts of mineral acids, salts of monobasic carboxylic acids, salts of dibasic carboxylic acids, and salts of tribasic carboxylic acids.

106. The compound of claim 105, wherein said pharmaceutically acceptable addition salts are selected from the group consisting of salts of hydrochloric acid, sulfuric acid, nitric acic acetic acid, propionic acid, maleic acid, fumaric acid, carboxysuccinic acid, and citric acid.

107. The compound of claim 104, wherein Y is in the 5 position.

108. The compound of claim 104, wherein Y is in the 6 position.

109. The compound of claim 104, wherein Y is selected from the group consisting of hydrogen, chlorine, bromine and fluorine.

110. The compound of claim 109, wherein Y is fluorine.

111. The compound of claim 110, wherein Y is in the 6 position.

112. The compound of claim 104, wherein p is 2, X is -O-, and Y is selected from the group consisting of lower alkoxy, hydroxy and halogen groups.

113. The compound of claim 112, wherein Y is a methoxy group.

114. The compound of claim 104, wherein R is selected from the group consisting of hydrogen, C_1-C_3 alkyl, C_1-C_3 alkoxy, hydroxyl, -$COCF_3$, C_1-C_6 alkanoyl, Cl, F, Br, I, C_1-C_3 alkylamino, -NO_2, -CF_3, -OCF_3, and -C(=O)-lower alkyl.

115. A pharmaceutical composition, which comprises a compound as claimed claim 104, and a pharmaceutically acceptable carrier therefor.

116. An antipsychotic composition which comprises a compound as claimed in claim 104, in an amount sufficient to produce an antipsychotic effect, and a pharmaceutically acceptable carrier therefor.

117. A method of treating psychoses, which comprises administering to a mammal a psychoses-treating effective amount of a compound as claimed in claim 104.

118. An analgesic composition which comprises a compound as claimed in claim 104, in an amount sufficient to produce a pain-relieving effect, and a pharmaceutically acceptable carrier therefor.

119. A method of alleviating pain, which comprises administering to a mammal a pain-relieving effective amount of a compound as claimed in claim 104.

120. A compound as claimed in claim 87, with the proviso that when m is 3, R is not -C(=O)-aryl, or -C(=O)-heteroaryl, all geometric, optical and stereoisomers thereof, or a pharmaceutically acceptable acid addition salt thereof.

121. A pharmaceutical composition, which comprises a compound as claimed in claim 120, and a pharmaceutically acceptable carrier therefor.

122. An antipsychotic composition which comprises a compound as claimed in claim 120, in an amount sufficient to produce an antipsychotic effect, and a pharmaceutically acceptable carrier therefor.

123. A method of treating psychoses, which comprises administering to a mammal a psychoses-treating effective amount of a compound as claimed in claim 120.

124. An analgesic composition which comprises a compound as claimed in claim 120, in an amount sufficient to produce a pain-relieving effect, and a pharmaceutically acceptable carrier therefor.

125. A method of alleviating pain, which comprises administering to a mammal a pain-relieving effective amount of a compound as claimed in claim 120.

126. A compound as claimed in claim 104, with the proviso that when m is 3, R is not -C(=O)-aryl, or -C(=O)-heteroaryl, all geometric, optical and stereoisomers thereof, or a pharmaceutically acceptable acid addition salt thereof.

127. A pharmaceutical composition, which comprises a compound as claimed in claim 126, and a pharmaceutically acceptable carrier therefor.

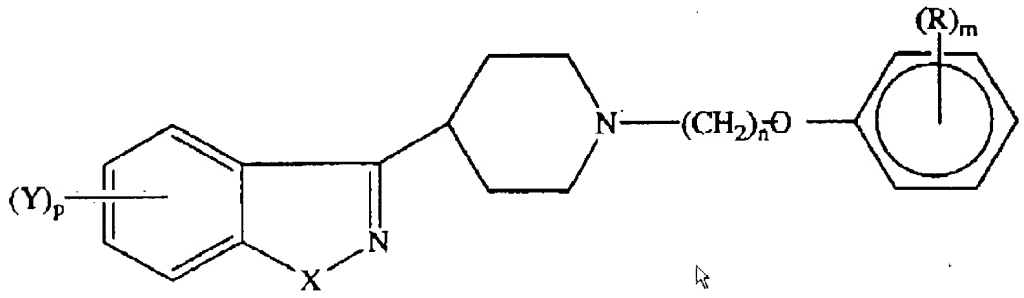
128. An antipsychotic composition which comprises a compound as claimed in claim 126, in an amount sufficient to produce an antipsychotic effect, and a pharmaceutically acceptable carrier therefor.

129. A method of treating psychoses, which comprises administering to a mammal a psychoses-treating effective amount of a compound as claimed in claim 126.

130. An analgesic composition which comprises a compound as claimed in claim 126, in an amount sufficient to produce a pain-relieving effect, and a pharmaceutically acceptable carrier therefor.

131. A method of alleviating pain, which comprises administering to a mammal a pain-relieving effective amount of a compound as claimed in claim 126.

132. (Amended) A compound of the formula



wherein

X is -O- or -S-;

p is 1 or 2;

Y is hydrogen, lower alkyl, hydroxy, chlorine, fluorine, bromine, iodine, lower alkoxy, trifluoromethyl, nitro, or amino, when p is 1;

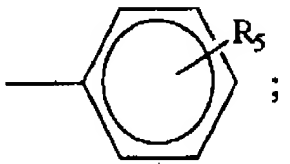
Y is lower alkoxy, hydroxy or halogen when p is 2 and X is -O-;

n is 2, 3, 4 or 5;

R is hydrogen, lower alkyl, lower alkoxy, hydroxyl, carboxyl, chlorine, fluorine, bromine, iodine, amino, lower mono or dialkylamino, nitro, lower alkyl thio, trifluoromethoxy, cyano, acylamino, trifluoromethyl, trifluoroacetyl, aminocarbonyl, dialkylaminocarbonyl, formyl, -C(=O)-alkyl, -C(=O)-O-alkyl, -C(=O)-aryl, -C(=O)-heteroaryl, -CH(OR$_7$)-alkyl, -C(=W)-alkyl, -C(=W)-aryl, or -C(=W)-heteroaryl;

wherein alkyl is lower alkyl;

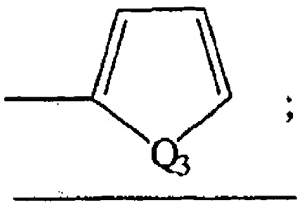
aryl is phenyl or



;

wherein R_5 is hydrogen, lower alkyl, lower alkoxy, hydroxy, chlorine, fluorine, bromine, iodine, lower monoalkylamino, nitro, cyano, trifluoromethyl, or trifluoromethoxy;

heteroaryl is



;

wherein Q_3 is -O-, -S-, -NH-, or -CH=N-;

W is CH_2 or CHR_8 or $N-R_9$;

R_7 is hydrogen, lower alkyl, or acyl;

R_8 is lower alkyl;

R_9 is hydroxy, lower alkoxy, or $-NHR_{10}$; and

R_{10} is hydrogen, lower alkyl, C_1-C_3 acyl, aryl, -C(=O)-aryl or -C(=O)-heteroaryl;

wherein aryl and heteroaryl are as defined above; and

m is 1, 2, or 3;

with the proviso that at least one R is selected from the group consisting of dialkylaminocarbonyl, formyl, -C(=W)-alkyl, -C(=W)-aryl, and -C(=W)-heteroaryl;

all geometric, optical and stereoisomers thereof, or a pharmaceutically acceptable acid addition salt thereof.

133. The compound of claim 132, wherein the pharmaceutically acceptable addition alt is selected from the group consisting of salts of mineral acids, salts of monobasic carboxylic cids, salts of dibasic carboxylic acids, and salts of tribasic carboxylic acids.

134. The compound of claim 133, wherein said pharmaceutically acceptable addition salts are selected from the group consisting of salts of hydrochloric acid, sulfuric acid, nitric acid, acetic acid, propionic acid, maleic acid, fumaric acid, carboxysuccinic acid, and citric acid.

135. The compound of claim 132, wherein Y is in the 5 position.

136. The compound of claim 132, wherein Y is in the 6 position.

137. The compound of claim 132, wherein Y is selected from the group consisting of hydrogen, chlorine, bromine and fluorine.

138. The compound of claim 137, wherein Y is fluorine.

139. The compound of claim 138, wherein Y is in the 6 position.

140. The compound of claim 132, wherein p is 2, X is -O-, and Y is selected from the group consisting of lower alkoxy, hydroxy and halogen groups.

141. The compound of claim 140, wherein Y is a methoxy group.

142. The compound of claim 132, wherein one R group is selected from the group consisting of hydrogen, C_1-C_3 alkyl, C_1-C_3 alkoxy, hydroxyl, -$COCF_3$, C_1-C_6 alkanoyl, Cl, F, Br, I, C_1-C_3 alkylamino, -NO_2, -CF_3, -OCF_3, and -C(=O)-lower alkyl.

143. A pharmaceutical composition, which comprises a compound as claimed in claim 132, and a pharmaceutically acceptable carrier therefor.

144. An antipsychotic composition which comprises a compound as claimed in claim 132, in an amount sufficient to produce an antipsychotic effect, and a pharmaceutically acceptable carrier therefor.

145. A method of treating psychoses, which comprises administering to a mammal a psychoses-treating effective amount of a compound as claimed in claim 132.

146. An analgesic composition which comprises a compound as claimed in claim 132, in an amount sufficient to produce a pain-relieving effect, and a pharmaceutically acceptable carrier therefor.

147. A method of alleviating pain, which comprises administering to a mammal a pain-relieving effective amount of a compound as claimed in claim 132.

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Application	Date	Code	Status	Priority	Sender	Text